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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,131	03/06/2000	JIANLEI XIE	RCA88670	9524

24498 7590 07/24/2007

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EXAMINER	
HALEY, JOSEPH R	
ART UNIT	PAPER NUMBER
2627	

MAIL DATE	DELIVERY MODE
07/24/2007	PAPER

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09445131	3/6/2000	XIE, JIANLEI	RCA88670

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ART UNIT	**PAPER**
2627	20070710

DATE MAILED:

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Commissioner for Patents

The IDS submitted on 4/30/07 has been considered.

/William R. Korzuch/
SPE, Art Unit 2627

shown in Figs 2, 3, and 3' is that no additional optical filters are needed in achieving red, green and blue sensors." (Yu, Column 14, Lines 7-14) It leads to a more simple design having sensors in only the LCD panel and the process of filtering and the end result is the same.

Tanigaki teaches in Claim 4:

The imaging display apparatus according to claim 1, which displays, on the liquid-crystal display element, an image based on the color image data from the color date generation section ([0016], backlight circuit for RGB emission).

5. **Claims 2,3 and 5-8** rejected under 35 U.S.C. 103(a) as being unpatentable over **Tanigaki (US 2003/0071932)** in view of **Yu (US 6,300,612 B1)**, as applied to claims 1 and 5, further in view of **Jojic et al. (US 2007/0104383 A1)**

Tanigaki and Yu teach in Claim 2:

The imaging display (Tanigaki, [0001]) apparatus according to claim 1, the imaging display apparatus further comprising:

a position detection section that detects the position of the subject (Yu, Column 16, Lines 4-11, prism sensor system as part of the camera); and

wherein the color image data generation section generates the color image data (Tanigaki, [0016], backlight for emission), but

Tanigaki and Yu do not explicitly teach "said at least one imaging unit comprising a plurality of imaging units", nor do they teach of an "imaging unit selection section that selects one of said plurality of imagine units"

However, in the same field of endeavor, camera systems for displays, Jojic teaches "multiple cameras could be included as input devices to the computer 110. The **use of multiple cameras** provides the capability to capture multiple views of an image simultaneously or sequentially, to capture **three-dimensional** or depth images, or to capture panoramic images of a scene. The images 193 from the **one or more cameras** 192 are input into the computer 110 via an appropriate camera interface 194." (Jojic, [0075]) He teaches of an imaging system comprising several camera units for imaging several image data sets to be displayed on a display. He further teaches that the input can be taken from one, or possibly more, cameras and that the data can then be output to be displayed.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the multiple unit imaging system as taught by Jojic with Tanigaki's camera input system, as modified by Yu, with the motivation that by using multiple cameras, a three-dimensional image can be captured and can be decomposed and to find sprites in images. (Jojic, [0013])

Tanigaki and Jojic teach in Claim 3:

The imaging display apparatus (Tanigaki, [0001]) according to claim 1, said at least one imaging unit comprising a plurality of imaging units (The combination with Jojic teaches of using multiple cameras to capture images), wherein the color image data generation section generates a plurality of color image data sets (Tanigaki, [0016], backlight circuit for RGB emission),

wherein each of said color image data sets is obtained by using said plurality of image data sets (Again, the combination with Jojic teaches to capture a plurality of images), obtained by imaging the subject with each of said plurality of imaging units, and the color image data generation section generates a three-dimensional color image based on said plurality of color image data sets (Jojic, [0075], three-dimensional image based off the data from the cameras);

and the output section outputs the three-dimensional color image generated by the color image data generation section. ([0075], output to computer)

Tanigaki teaches in Claim 5:

An imaging display apparatus ([0001]) comprising:

a display device that displays an image, including a filter device that filters at least three colors ([0042, color filter]);

at least one image device that images a subject positioned adjacent to a front side of said display device, (Figure 2 shows the camera 8 adjacent), wherein the display device displays said image alternately with respect to the imaging device imaging said subject([0038], the CCD images and is then displayed on LCD and the process repeats alternately);

means for controlling light transmittance ([0051], transmission to the electrodes of the LCD) so as to only allow light at said sets of light transmitting devices having a selected one of said at least three colors to pass through the display device when the subject is imaged during said timing wherein the selected one of said at least three colors is switched at an timing ([0051], Figure 7 shows the timing chart for transmitting signals to the electrodes of the LCD);

means for controlling said imaging device synchronously with the timing ([0051], Figure 7 shows the timing chart for transmitting signals to the electrodes of the LCD);

means for generating color image data by merging a plurality of image data sets corresponding to said at least three colors in said filter device ([0016], RGB, [0042], filter) and obtained by imaging the subject with said at least one image device ([0042]); and

means for transmitting the color image data generated by the means for generating to a remote user. ([0016], backlight circuit for RGB emission), but

Tanigaki does not explicitly teach "said imaging device being located adjacent to a back side of the display device and **not capable of filtering any of said at least three colors**"

However, in the same field of endeavor, CCD cameras, Yu teaches "No additional shutter is needed for the image sensors constructed with liquid crystal color filters. Hence, **a full-color digital camera** can be made with the wide-band, **black/white image sensor** placed at the focal plan and with the liquid crystal filter placed at the traditional shutter plan. **The liquid crystal filter functions as both the shutter and the R,G,B color filters.**" (Yu, Column 14, Lines 43-

48) Yu teaches that the LCD contains the filter and that the camera contains no means for filtering any of the RGB data.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the imaging unit with no filtering means as taught by Yu with Tanigaki's camera input system with the motivation that an "important advantage of the sensing elements shown in Figs 2, 3, and 3' is that no additional optical filters are needed in achieving red, green and blue sensors." (Yu, Column 14, Lines 7-14) It leads to a more simple design having sensors in only the LCD panel and the process of filtering and the end result is the same.

Furthermore, Tanigaki and Yu do not explicitly teach of "a plurality of sets of light transmitting devices" to carry out the processes stated above.

However, in the same field of endeavor, camera systems for displays, Jojic teaches "multiple cameras could be included as input devices to the computer 110. The **use of multiple cameras** provides the capability to capture multiple views of an image simultaneously or sequentially, to capture **three-dimensional** or depth images, or to capture panoramic images of a scene. The images 193 from the **one or more cameras** 192 are input into the computer 110 via an appropriate camera interface 194." (Jojic, [0075]) He teaches of an imaging system comprising several camera units for imaging several image data sets to be displayed on a display. He further teaches that the input can be taken from one, or possibly more, cameras and that the data can then be output to be displayed.

Therefore, it would have been obvious to a person with ordinary skill in the art at the time of the invention to integrate the multiple unit imaging system as taught by Jojic with Tanigaki's camera input system, as modified by Yu, with the motivation that by using multiple cameras, a three-dimensional image can be captured and can be decomposed and to find sprites in images. (Jojic, [0013])

As per Claim 6:

The only difference between this claim and claim 2 is the addition of multiple imaging units, which is taught by the combination with Jojic and is thus rejected under the same reasoning as given earlier in claim 2.

As per Claim 7:

The only difference between this claim and claim 3 is the addition of multiple imaging units, which is taught by the combination with Jojic and is thus rejected under the same reasoning as given earlier in claim 3.

As per Claim 8:

This claim is rejected based on the same reasoning as given earlier in Claim 4.

Conclusions

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fujita et al. (US 4339769 A) is cited to teach of a camera that does not have any filtering means.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis P. Joseph whose telephone number is 571-270-1459. The examiner can normally be reached on Monday-Friday, 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on 571-272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DJ

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SUPERVISORY PATENT EXAMINER